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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,991	11/27/2000	Oleg Yaroshchuk	KSU-189	5867

7590

11/04/2003

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Akron, OH 44308-1456

EXAMINER
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DUDEK, JAMES A

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/722,991

Applicant(s)

YAROSHCHUK ET AL.

Examiner

James A. Dudek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 9-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 18 and 21 is/are rejected.
- 7) ☒ Claim(s) 19-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 18 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by 5389698.

Per claim 1, 698 teaches an optical compensation film for a liquid crystal display comprising a polymer [see column 2, line 52, the polymer is polyvinyl cinnamate] capable of producing light induced anisotropy characterized in that the polymer has been irradiated with light to form at least one optical axis [see column 2, lines 16-30]. Accordingly 698 anticipated claim 1.

This is a remarkable broad claim with three limitations. The first being a “polymer.” The second being the polymer having “at least one optical axis.” The third limiting the polymer to anisotropy type polymers, this comes from the clause “capable of producing light induced anisotropy.” The clause “has been irradiated with light for form” is a product by process limitation and in this case is given no weight; see MPEP 2100.

Regarding the controlled in-plane and out of plane retardation, this is inherent to compensators. Compensators retard light in all direction except those two matching the plane corresponding to the extraordinary axis and ordinary axis and in those planes it may still refract light. Thus, in any of the other direction it will have a retarding effect in the primary plane and nearly all the secondary planes.

Per claim 2 and 18, the optical compensation film of claim 1, wherein the polymer is selected from the group consisting of polyimides, methacrylates, acrylates, vinyls, vinyl ethers, siloxanes, styrene, epoxy polymers [see example 3, polyvinyl]. Lacking from 433 is the film containing a functional group in at least one of a main chain and a side chain, and mixtures thereof, wherein the functional group is selected from the group consisting of azobenzene,

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stilbene, cinnamate, maleimide, coumarin, and mixtures thereof [see example 3, polyvinyl cinnamate]. These recited formulae can be found in one of the above polymers.

Per claim 3, the optical compensation film of claim 1, wherein the polymer has been irradiated with light that is at least one of linearly polarized light, elliptically polarized light, circularly polarized light, partially polarized light, and non polarized light. This is product by process limitation and anticipated by 698.

Per claim 4, the optical compensation film of claim 1, wherein the polymer has been irradiated a plurality of times. This is product by process limitation and anticipated by 698.

Per claim 5, the optical compensation film of claim 1, wherein the polymer has been irradiated a plurality of times and wherein the light on subsequent irradiations has at least one of a different polarization and a different angle with respect to a plane formed by the film. This is product by process limitation and anticipated by 698.

Per claim 6, the optical compensation film of claim 1, wherein the film is a plane and the optical axis is oriented to the plane in one of lying in the plane of the film, perpendicular to the plane of the film, tilted to the plane of the film, and changing across the film. See column 2, first paragraph, two predetermined areas in different planes.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7-8, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over 698.

Per claim 7, the optical compensation film of claim 1, wherein the film is a plane and has a biaxial structure, and the film has optical axes that are each one of oriented to the plane in one of lying in the plane of the film, perpendicular to the plane of the film, tilted to the plane of the film, and changing across the film, and wherein the optical axes are oriented different from each other. The biaxial structure is inherent since the structure, polyvinyl cinnamate, and the method of forming the film, irradiating with light, are identical to the claimed methods. The only issue is the direction of the optical axis. 698 teaches forming different optical axis in different direction in order to compensate for different pixels. As such, it would have been a matter of design choice to form each one of oriented to the plane in one of lying in the plane of the film, perpendicular to the plane of the film, tilted to the plane of the film and changing, because one would want to match the orientation of the compensator to the orientation of the liquid crystal for a given pixel region.

Per claim 8, see column 1, lines 55-65. Lacking is the electrodes and substrates and film on the electrodes. However, these were all well known for inducing electric field to switch the liquid crystal, support the cell, and decrease parallax, respectively. Accordingly, it would have been obvious to one of ordinary skill at the time the invention was made to combine the well known elements with 698.

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***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Response to Arguments***

Applicant's arguments filed 8/4/03 have been fully considered but they are not persuasive. The newly added limitations are inherent to the already recited structure. See rejection above.

***Allowable Subject Matter***

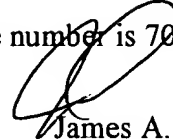
Claims 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 308-4782. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7721 for regular communications and 703-308-7721 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



James A. Dudek  
Primary Examiner  
Art Unit 2871

November 3, 2003